

5.0 STANDARDS AND QUALITY ASSURANCE

5.1 Environmental Standards and Regulations

The following environmental standards and regulations are applicable at the WVDP site boundary:

- o DOE Order 5480.1, "Requirements for Radiation Protection," August 1981.
- o U.S. Federal Radiation Council, Background Material for the Development of Radiation Protection Standard, Report No. 1, (1960) and Report No. 2 (1961), Superintendent of Documents, U.S. Government Printing Office, Washington, D.C.
- o U.S. Environmental Protection Agency, National Primary and Secondary Ambient Air Quality Standards, 40 CFR 50, 1980.
- o Department of Environmental Conservation, State of New York, Environmental Conservation Law of New York State, Title 8, Article 19, October 18, 1972.

The standards and guides for releases of radionuclides at the WVDP are those of DOE Order 5480.1, Chapter XI, dated August 13, 1981, entitled, "Requirements for Radiation Protection." Radiation protection standards and selected radioactivity concentration guides from Chapter XI are listed in Appendix B. The most restrictive guide is listed when there is a difference between soluble and insoluble chemical forms. These listed guides are virtually identical to those in the Code of Federal Regulations (CFR), Title, 10, Part 20. Ambient air and water quality standards contained in the individual SPDES permits issued for the facility are listed in Table 7.

5.2 Quality Assurance

The radiochemical analyses for the environmental samples collected during 1983 were performed by off-site laboratories. A documented laboratory quality assurance plan is used for these laboratories, including periodic interlaboratory cross-checks, prepared standard and blank analyses, routine instrument calibration, and use of documented procedures. Sample collection and radiometric counting at the site laboratory was in accordance with written procedures, including the use of appropriate calibration techniques, where applicable.

Non-radiological analyses are also performed by a qualified contract laboratory. WVNS subscribes to the SPDES cross-check program sponsored by the U.S. Environmental Protection Agency to assure the continuing accuracy of permitted laboratory results.

5.3 Statistical Reporting of Data

Individual analytical results are reported, except where noted, with plus or minus (\pm) two analytical standard deviations (2σ) indicating the counting uncertainty. The arithmetic averages were calculated using actual results, including zero and negative values. In the final results, if the 95 percent confidence interval included zero, the measurement was assumed to indicate no discernible activity. Less than ($<$) values indicate the lower limit of detection for that analysis.